

What is claimed is:

1. An optical sheet optimization method comprising the steps of:
extracting a statistic sample using transmissivity, haze data and luminance data of an optical diffusion sheet corresponding to the transmissivity and the haze data;
making a regression model for the extracted statistic sample;
calculating a regression coefficient to minimize an error term (residual) of the regression model and deriving a regression expression using the calculated regression coefficient; and
predicting a luminance of the optical diffusion sheet due to changes of the transmissivity and the haze data using the derived regression expression.

2. The method according to claim 1, wherein the regression model is made into a multi regression model for the transmissivity and haze data.

3. The method according to claim 1, wherein the regression model is made into an expression as follows:

$$L = a + bT + cH + dT^2 + eH^2 + fTH + e_i$$

where L is luminance,

T is transmissivity,

H is Haze,

a, b, c, d, e, and f are regression coefficients for each item, and

e_i is an error term (residual).

4. The method according to claim 1, wherein the regression expression is derived by an expression as follows:

$$L = a + bT + cH + dT^2 + eH^2 + fTH$$

where L is luminance,

T is transmissivity,

H is Haze, and

a, b, c, d, e, and f are regression coefficients for each item.

5. The method according to claim 1, wherein in calculating the regression coefficient to minimize the error term (residual) of the regression model, the regression coefficient is calculated using a minimum square method.

6. An optical sheet manufactured to be suitable for transmissivity and haze selected as optical sheet conditions using a result predicted through an optical sheet optimization method comprising the steps of:

extracting a statistic sample using transmissivity, haze data and luminance data of an optical diffusion sheet corresponding to the transmissivity and the haze data;

making a regression model for the extracted statistic sample;

calculating regression coefficient to minimize an error term (residual) of the regression model and deriving a regression expression using the calculated regression coefficient; and

predicting a luminance of the optical diffusion sheet due to changes of the transmissivity and the haze data using the derived regression expression.

7. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 77 - 92 % and haze of 40 - 85 %.

8. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 72 - 77 % and haze of 40 - 42 %.

9. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 77 - 80 % and haze of 10- 40 %.

10. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 72 - 85 % and haze of 60 - 70 %.

11. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 84 - 87 % and haze of 10 - 70 %.

12. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 72 - 92 % and haze of 80 - 85 %.

13. The optical sheet according to claim 6, wherein the selected optical sheet conditions has transmissivity of 88 - 92 % and haze of 10 - 85 %.

14. An image display device comprising an optical sheet manufactured to be suitable for transmissivity and haze selected as optical sheet conditions using a result predicted through an optical sheet optimization method comprising the steps of:

extracting a statistic sample using transmissivity, haze data and luminance data of an optical diffusion sheet corresponding to the transmissivity and the haze data;

making a regression model for the extracted statistic sample;

calculating regression coefficient to minimize an error term (residual) of the regression model and deriving a regression expression using the calculated regression coefficient; and

predicting a luminance of the optical diffusion sheet due to changes of the transmissivity and the haze data using the derived regression expression.

15. The image display device according to claim 14, wherein the selected optical sheet conditions has transmissivity of 77 - 92 % and haze of 40 - 85 %.